

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 29

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HIROSHI MUKAWA

Appeal No. 1998-0599
Application 08/434,029¹

ON BRIEF

Before McKELVEY, Senior Administrative Patent Judge., and
SCHAFFER and LEE, Administrative Patent Judges.

LEE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 31-36. Claims 27 and 29-30 have been allowed. Claims 1-26 and 28 have been canceled.

References relied on by the Examiner

Kato
5, 1989

4,885,653

December

¹ Filed May 3, 1995. According to the appellant, it is a continuation of application 08/195,976, filed February 10, 1994, which is a continuation of application 07/833,927, filed February 11, 1992. The real party in interest is Sony Corporation.

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Sakaguchi et al. (Sakaguchi)	4,847,826	July 11, 1989
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The Rejection on Appeal

Claims 31-34 and 36 stand rejected under 35 U.S.C. § 103 as being unpatentable over Kato.

Claim 35 stands rejected under 35 U.S.C. § 103 as being unpatentable over Kato and Sakaguchi.

The appellant has grouped claims 31-34 and 36 together for single treatment in this appeal. (Br. at page 5).

The Invention

The claimed invention is directed to an optical disc or recording medium comprising a single-piece disc-shaped transparent substrate having a recess formed in a first surface around a center hole and a magnetic member inserted into the recess thus closing the center hole. The substrate has a second surface parallel to the first surface and an annular rib projecting from the second surface around the center hole. Claims 31 and 36 are the only independent claims on appeal and are reproduced below:

31. An optical recording medium comprising:

a single-piece disc-shaped transparent substrate having a first surface, a second surface parallel to the first surface, and a center hole formed at a center of the disc-shaped transparent substrate, with the center hole extending through the transparent substrate in a direction from the first

surface to the second surface, the transparent substrate also having a recess portion formed in the first surface around the center hole and an annular rib projecting from the second surface around the center hole;

a recording layer formed on the first surface of the transparent substrate;

a magnetic member inserted into the recess portion of the transparent substrate, the magnetic member closing the center hole of the transparent substrate; and

a cartridge body for containing the transparent substrate, the recording layer and the magnetic member, the cartridge body having a first cartridge surface opposite the first surface of the transparent substrate, the cartridge having a second cartridge surface opposite the second surface of the transparent substrate, with the second cartridge surface having a recording/reproducing aperture and having a central aperture with the annular rib projected therein.

36. An optical disc comprising:

a single-piece disc-shaped transparent substrate having a first surface, a second surface parallel to the first surface, and a center hole formed at a center of the disc-shaped transparent substrate, with the center hole extending through the transparent substrate in a direction from the first surface to the second surface, the transparent substrate also having a recess portion formed in the first surface around the center hole and an annular rib projecting from the second surface around the center hole;

a recording layer formed on the first surface of the transparent substrate; and

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a magnetic member inserted into the recess portion of the transparent substrate, the magnetic member closing the center hole of the transparent substrate;

wherein the annular rib has a top surface which is parallel to the second surface of the transparent substrate, and the annular rib has an outside diameter,

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the recess portion has a diameter, and the diameter of the recess portion is smaller than the diameter of the annular rib.

Opinion

We affirm the rejection of claims 31-34 and 36 and reverse the rejection of claim 35.

Our affirmance of the prior art rejection is based only on the arguments presented by appellants in their briefs. Arguments not raised in the briefs are not before us, are not at issue, and are considered as waived.

The rejection of claims 31-34 and 36

Central to this rejection is the examiner's conclusion that it would have been obvious to one with ordinary skill in the art, in light of Kato's multi-member disk substrate including the disk 16 and the control ring 19, to form a single-piece substrate as is claimed by the appellant.² Citing Howard v. Detroit Stove Works, 150 U.S. 164 (1893), the examiner stated in the final Office action (Paper No. 24, at 4):

² The examiner made clear his view that in the context of the rejection, the flange 18 of Kato is not regarded as a part of the substrate. (Answer at page 9).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to create the substrate of Kato as a single piece, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art.

The appellant argues that because Kato's disk 16 and control ring 19 are made from different materials, the case cited by the examiner is not apposite and that it would not have been obvious to one with ordinary skill in the art to make Kato's disk and control ring by a single-piece construction. That Kato's magnetic member 18 is made from a different material is not relevant since the examiner clearly indicated that the magnetic member 18 is not a part of the substrate relied on for the rejection. The appellant has not argued against that position of the examiner.

In rebuttal, the examiner disagrees that Kato discloses that the material of disk 16 and of control ring 19 are different. The examiner correctly points out that the particular material of disk 16 is not specified in Kato, which states only that element 16 is a circular magnetic sheet. The examiner further points out that conventional optical disks are shown in the appellant's prior art Figure 1 and described

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on page 1 of the appellant's specification. Where the specific material is unspecified as is apparently the case with Kato's disk, one with ordinary skill in the art would naturally resort to what is conventional in the art. The appellant's specification on page 1 describes known

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optical recording disk as having a base substrate formed of a light-transmitting material, such as polycarbonate resin.

Polycarbonate is a well known material. For good reason, the appellant has not disputed the art-recognized properties of the material. Polycarbonate is a transparent thermoplastic resin easily fabricated by thermoforming. See The Condensed Chemical Dictionary, Eighth Edition, 1971 (copy of definition enclosed). Kato describes that its control ring 19 is formed by a compound plastic containing a filler and that the compound plastic "can be selected mainly from thermoplastic resins such as polyacetal, nylon, polybutylene terephthalate, polyester, polypropylene, polyethylene, polyfluoroethylene, etc." (Kato, column 2, lines 10-20). Such evidence, from the perspective of one with ordinary skill in the art, reasonably would have suggested that Kato's disk media 16 and control ring 19 can be made from the same kind of material, e.g., a thermoplastic like polycarbonate resin. On this record, there is no reason for one with ordinary skill in the art to suspect that the presence of a filler would cause the plastic to become unsuitable as the disk media substrate.

Because one with ordinary skill in the art would have recognized that Kato's disk media 16 and control ring 19 can be made from the same material, the examiner is correct that it would have been obvious to one with ordinary skill in the art in view of Kato to form the disk media 16 and control ring 19 as a single-piece substrate. Even the appellant has stated: "The Examiner's reasoning about modifying Kato to have a single-piece substrate might have some force if Kato taught that the pieces of its multiple-piece disk assembly (i.e., disk, control ring and flange) were made of the same material."

The appellant further argues that the examiner's proposed modification of Kato would render Kato's system inoperative, because there is no basis for assuming that the compound plastic material of Kato's control ring 19 is a suitable material for recording data. The argument is misplaced because, as the examiner has explained, it is only important that the recording layer deposited on top of the plastic substrate be suitable for recording data, not the plastic substrate itself. (Answer at 10). Note that each of independent claims 31 and 36 recite "a recording layer formed

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on the first surface of the transparent substrate." The appellant states in footnote 3 of its brief that perhaps the examiner is suggesting that the disk media 16 and the control ring 19 in Kato can be formed of a single-piece substrate and a recording layer can be deposited thereon. The appellant then argues (Br. at 9) that Kato does not teach or suggest that such a material is suitable for forming a hub portion of a disk

cartridge. But appellant does not point out where in any claim is a limitation that the hub portion of a disk cartridge is formed from the material forming the single-piece substrate. Secondly, to the extent that Kato's control ring 19 acts as the hub portion of a disk cartridge, Kato discloses use of material forming the control ring 19 to form the hub portion of a disk cartridge.

Finally, in footnote 3 of its brief, the appellant argues that Kato's disclosures about the mechanical properties of control ring 19 "teach away from substituting a transparent optical disk substrate material to form the control ring portion 19." The argument is not supported by any further discussion, explanation, or specific reference to Kato's disclosure. We have not been directed to any portion of Kato or given a meaningful explanation that would indicate that polycarbonate resin, a known optical disk substrate material and a thermoplastic, cannot be used to form Kato's control ring 19. Counsel's argument cannot take the place of evidence lacking in the record. Knorr v. Pearson, 671 F.2d 1368, 1373, 213 USPQ 196, 200 (CCPA 1982); Meitzner v. Mindick, 549 F.2d 775, 782, 193 USPQ 17, 22 (CCPA), cert. denied, 434 U.S. 854,

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195 USPQ 465 (1977); In re Lindner, 457 F.2d 506, 508, 173
USPQ 356, 358 (CCPA 1972). The appellant

simply has not sufficiently developed the argument by reference to the underlying evidence for it to be persuasive. Note also that Kato specifically describes that the plastic base material for forming the control ring 19 "can be selected mainly from thermoplastic resins such as polyacetal, nylon, polybutylene terephthalate, polyester, polypropylene, polyethylene, polyfluoroethylene, etc." The appellant has made no explanation as to why polycarbonate resin does not fall within this class of thermoplastic material.

The rejection of claim 35

We reverse the rejection of claim 35. A reversal of the rejection on appeal should not be construed as an affirmative indication that the appellant's claims are patentable over prior art. We address only the positions and rationale as set forth by the examiner and on which the examiner's rejection of the claims on appeal is based.

Claim 35 depends from claim 31 and further specifies a cartridge rib projecting from the second cartridge surface towards the second surface of the substrate and being formed around the central aperture. The claim specifies that the

cartridge rib is engageable with the annular rib projecting from the second surface of the substrate.

Kato's disk cartridge evidently does not include any cartridge rib on the second surface. However, it does show annular ribs extending from the second surface of the substrate. The examiner identifies in Sakaguchi a cartridge rib extending from the second surface of the disk cartridge towards the second surface of the disk substrate, but can point to no annular rib extending from the second surface of Sakaguchi's disk substrate.

The examiner concludes, however, that it would have been obvious to add a cartridge rib to Kato just as it is disclosed in Sakaguchi, to prevent the entry of dust and other contaminants at the opening. According to the examiner, "such protective walls, dams and other structures are widely used to inhibit the ingress of dust in order to make the cartridge as airtight as possible without compromising functionality" (answer at 7). The appellant has not disputed the examiner's finding that protective walls, dams, and other structures as such are widely used to inhibit the ingress of dust. Thus, the examiner has not been shown to have erred in making that

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critical finding. Given that ribs are known as a means to minimize the entry of dust and contaminants into the central aperture, we agree with the examiner that it would have been obvious to one with ordinary skill in the art to add a

cartridge rib, such as that disclosed in Sakaguchi, to Kato's disk cartridge.

We disagree with the examiner's conclusion (answer at p.11), however, that incorporating a cartridge rib into Kato's cartridge in a similar position as is taught in Sakaguchi, "would yield" a cartridge rib engageable with the annular rib projecting from the second surface of Kato's substrate. No factual basis has been presented by the examiner to justify that conclusion. Nothing has been set forth to show that a cartridge rib extending toward the second surface of the disk substrate is necessarily engageable with an annular rib projecting out from the second surface of the disk substrate. On this record, the examiner's conclusion appears to be based on mere speculation and hindsight. We do not address whether it would have been obvious to have the cartridge rib and annular rib be engageable with each other, because that is not the stated position of the examiner who states merely (1) that incorporating a cartridge rib into Kato's cartridge "would yield" a cartridge rib engageable with the annular rib projecting from the second surface of Kato's substrate, and (2) that as incorporated into the cartridge of Kato, the

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cartridge rib "would be" engageable to the annular rib of the substrate" (answer at p. 7).

For the foregoing reasons, we do not sustain the rejection of claim 35.

Conclusion

The rejection of claims 31-34 and 36 under 35 U.S.C. § 103 as being unpatentable over Kato is affirmed.

The rejection of claim 35 under 35 U.S.C. § 103 as being unpatentable over Kato and Sakaguchi is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)

AFFIRMED-IN-PART

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FRED E. McKELVEY, Senior)	
Administrative Patent Judge)	
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RICHARD E. SCHAFER)	APPEALS AND
Administrative Patent Judge)	INTERFERENCES
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